

**KTH TH-R9/AD-R9/TH-RH5
AUTOMATIC DOOR SYSTEM**



■ TABLE OF CONTENTS

1. SPECIFICATION & PROFILE	1
2. SPECIFICATION & PROFILE	2
3. COMPONENTS(TH-R9/AD-R9)	3
4. COMPONENTS(TH-RH5)	4
5. ALUMINUM PROFILE DRAWING	5
6. INSTALL THE BELT ROLLER AND THE RACK BELT	6
7. LEGEND OF PART DRAWING	7
8. TEST&ADJUST(TH-R9)	8
9. ADJUST CONTROLLER	9
10. TEST & ADJUST(AD-R9).....	10
ADJUST CONTROLLER-1	11
11. ADJUST CONTROLLER-1	11
12. TEST & ADJUST(TH-RH5)	12
13. TEST & ADJUST(TH-RH5)	13
14. WIRING DIAGRAM OF TH-100(TH-R9/AD-R9/TH-RH5)	14
15. TH-125(NEW)-REMOTE CONTROL	15
TH-136-MULTIFUNCTION DIGITAL SWITCH	16
16. A-11 SAFETY BEAM & 3H-CH01 SENSOR	16
17. HR100-CT(EN-16005) SAFETY	17
18. TH-201 & TH-200LK	18
19. TH-135-FUNCTION KEY SWITCH	19

SPECIFICATION&PROFILE

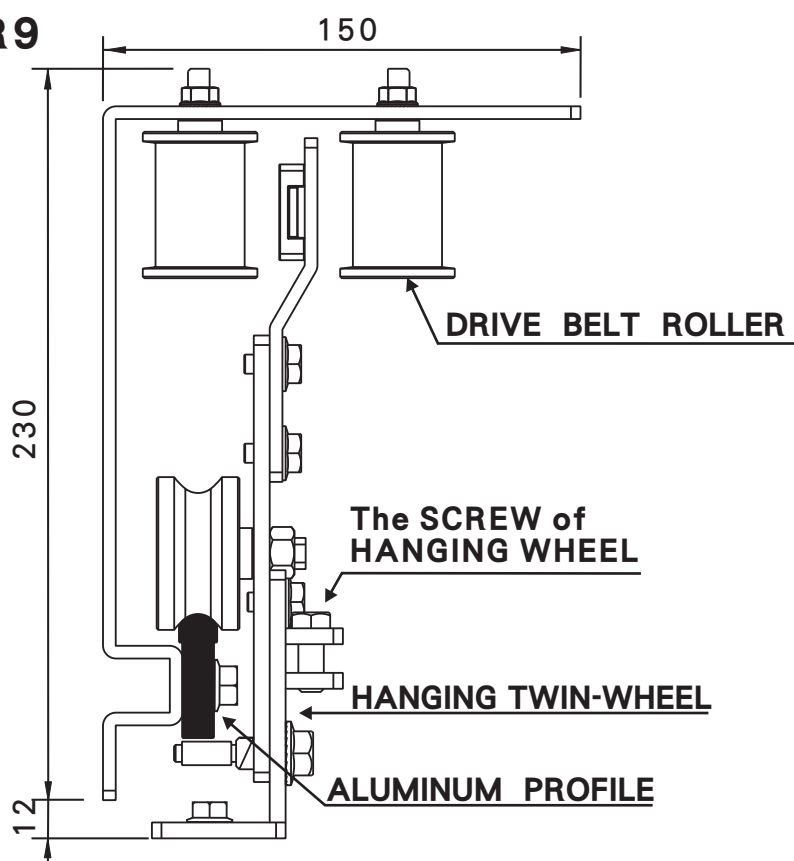
TYPE	TH-R9	
MODEL	SINGLE-WINGED	BI-PARTING
DOOR WEIGHT	120kgX1(door)	100kgX2(door)
DOOR WIDTH	DW=500mm~2500mm	DW=500mm~2500mm
INSTALL WAY	Surface install	Surface install
MOTOR	DC24V 75W BRUSHLESS DC MOTOR	
CONTROL	STANDARD MICRO-CONTROLLER	
POWER CONSUMPTION	75W	
VOLTAGE	either AC100V~240V	
ENVIRONMENTAL TEMPERATURE	-20°C~+50°C	
VOLUME	60 decibel(max.)	
STARTING SPEED	600mm/secondX1 door	550mm/secondX2 doors
STARTING TIME	0~64sec.(regulable)	
TRANSMISSION IMPORTANT CONDITION	RACK BELT S8M	
OPENING DOOR RANGE	FULL/HALF-OPEN (regulable)	
PFC ^{POWER EFFICIENCY}	0.95(in AC100V Full load)	
TRACTION FORCE	4.5 kg	

TYPE	AD-R9	
MODEL	SINGLE-WINGED	BI-PARTING
DOOR WEIGHT	120kgX1(door)	100kgX2(door)
DOOR WIDTH	DW=500mm~2500mm	DW=500mm~2500mm
INSTALL WAY	Surface install	Surface install
MOTOR	DC24V 75W WORM GEAR MOTOR	
CONTROL	USER-FRIENDLY MICRO-CONTROLLER	
POWER CONSUMPTION	75W	
VOLTAGE	Either AC100V~240V	
ENVIRONMENTAL TEMPERATURE	-20°C~+50°C	
VOLUME	60 decibel(max.)	
STARTING SPEED	600mm/secondX1 door	550mm/secondX2 doors
STARTING TIME	0~64sec.(regulable)	
TRANSMISSION IMPORTANT CONDITION	RACK BELT S8M	
OPENING DOOR RANGE	FULL/HALF-OPEN (regulable)	
PFC ^{POWER EFFICIENCY}	0.95(in AC100V Full load)	
TRACTION FORCE	4.5 kg	

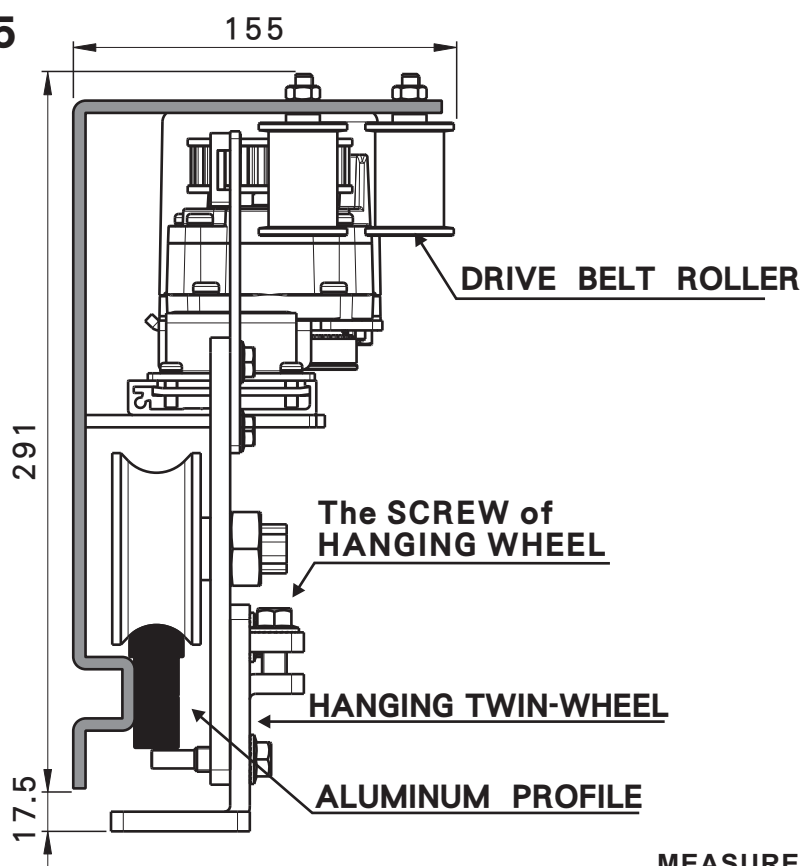
TYPE	TH-RH5	
MODEL	SINGLE-WINGED	BI-PARTING
DOOR WEIGHT	250kg X1(door)	220kgX2(door)
DOOR WIDTH	DW=500mm~3000mm	DW=500mm~3000mm
INSTALL WAY	Surface install	Surface install
MOTOR	DC24V 120W BRUSHLESS DC MOTOR	
CONTROL	STANDARD MICRO-CONTROLLER	
POWER CONSUMPTION	120W	
VOLTAGE	AC100V~240V	
ENVIRONMENTAL TEMPERATURE	-20°C~+50°C	
VOLUME	60 decibel(max.)	
STARTING SPEED	600mm(second)	550mm(second)
STARTING TIME	0~64sec.(regulable)	
TRANSMISSION IMPORTANT CONDITION	RACK BELT S8M	
OPENING DOOR RANGE	FULL/HALF-OPEN (regulable)	
PFC ^{POWER EFFICIENCY}	0.95(in AC100V Full load)	
TRACTION FORCE	6.5 kg	

■ SPECIFICATION&PROFILE

• TH-R9/AD-R9



• TH-RH5

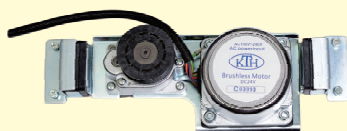


MEASURE : mm

COMPONENTS(TH-R9/AD-R9)



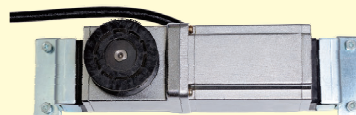
MICRO-CONTROLLER



BRUSHLESS DC MOTOR



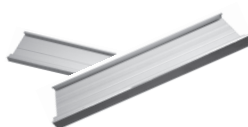
MICRO-CONTROLLER



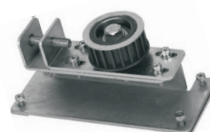
WORM GEAR MOTOR



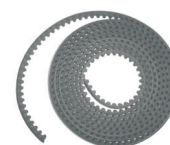
COMBINED
TERMINAL BLOCK



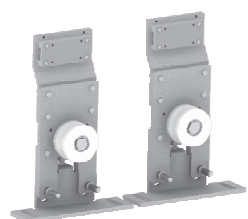
MOTOR/BELT ROLLER-2 PCS



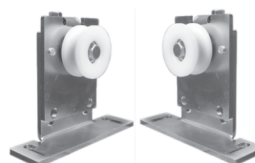
BELT ROLLER



RACK BELT



HANGING TWIN-WHEEL
2 PCS(INCLUDE ACTIVE/
PASSIVE BRACE)



HANGING
TWIN-WHEEL 2 PCS



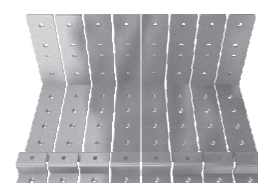
DRIVE BELT
ROLLER-16 PCS



SUPPLEMENTARY
BRACE-4 PCS



FIXED SUPPORT
for Motor and
Belt Roller-4 PCS



FIXED SUPPORT
for Drive Belt
Roller and Aluminum
Profile-8 PCS



CONNECTING BRACE



BLOCK SCREW-8 PCS



HANGING BRACE-4 PCS



STOPER-2 PCS

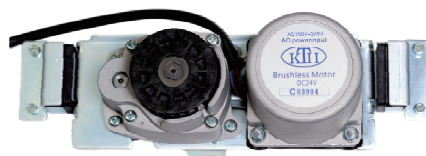


DOOR SCREW-8 PCS

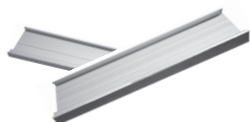
COMPONENTS(TH-RH5)



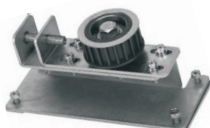
MICRO-CONTROLLER



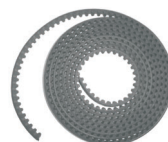
BRUSHLESS DC MOTOR



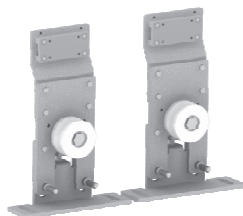
MOTOR/BELT
ROLLER-2 PCS



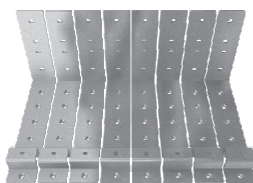
BELT ROLLER



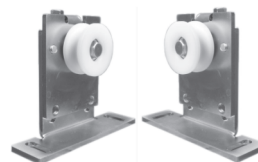
RACK BELT



HANGING TWIN-WHEEL
2 PCS(INCLUDE ACTIVE/
PASSIVE BRACE)



FIXED SUPPORT
for Drive Belt
Roller and Aluminum
Profile-10 PCS



HANGING
TWIN-WHEEL 2 PCS



SUPPLEMENTARY
BRACE-6 PCS



DRIVE BELT
ROLLER-20 PCS



FIXED SUPPORT
for Motor and
Belt Roller-4 PCS



BLOCK
SCREW-8 PCS



STOPER-2 PCS



COMBINED
TERMINAL BLOCK



CONNECTING BRACE



HANGING
BRACE-4 PCS

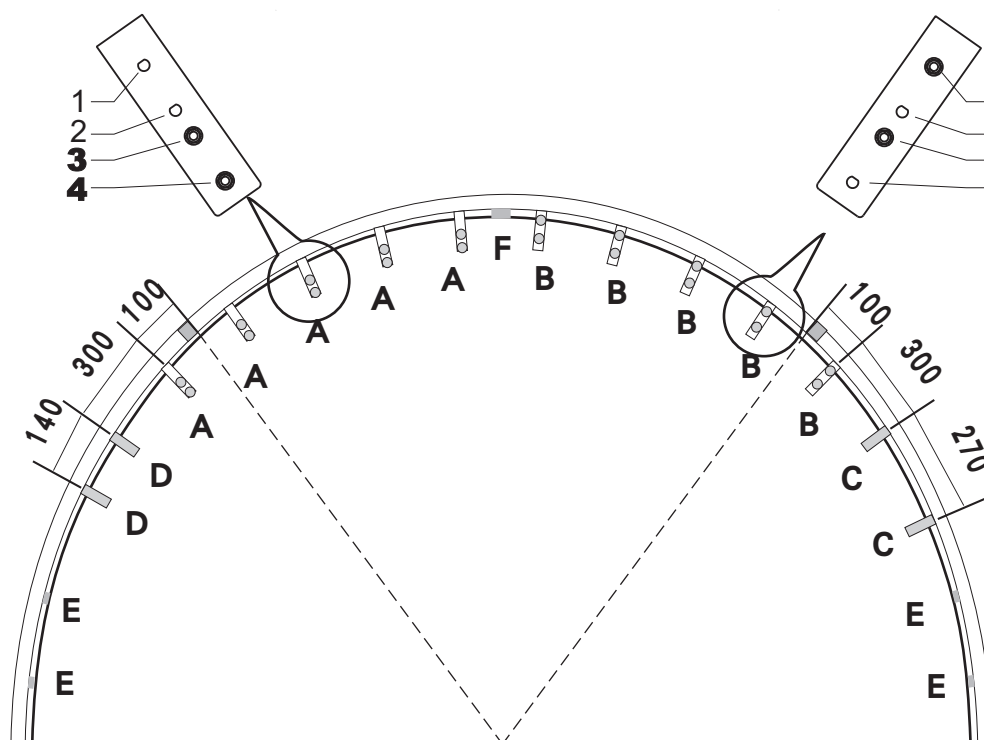


DOOR SCREW-8 PCS

ALUMINUM PROFILE DRAWING

A. Position of drive belt roller
(Near Belt-Roller)

B. Position of drive belt roller
(Near Motor)



MEASURE : mm

(A),(B),(C),(D),(E),(F) are different FIXED SUPPORT for different function and position.

(A): for Drive Belt Roller and Aluminum-Profile (Near Belt-Roller)

(B): for Drive Belt Roller and Aluminum-Profile (Near Motor)

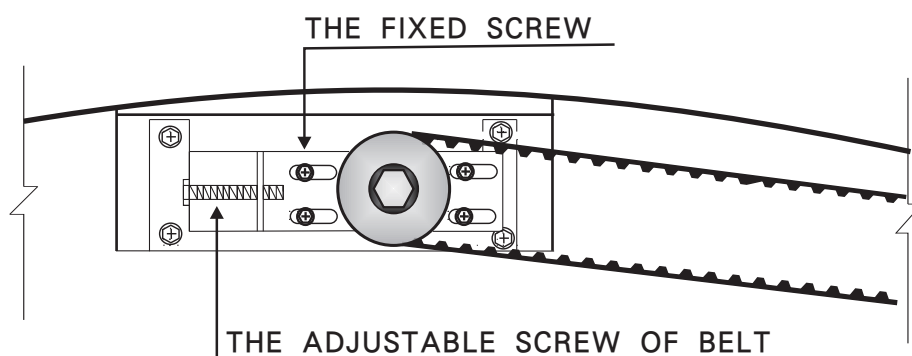
(C): for Motor

(D): for Belt-Roller

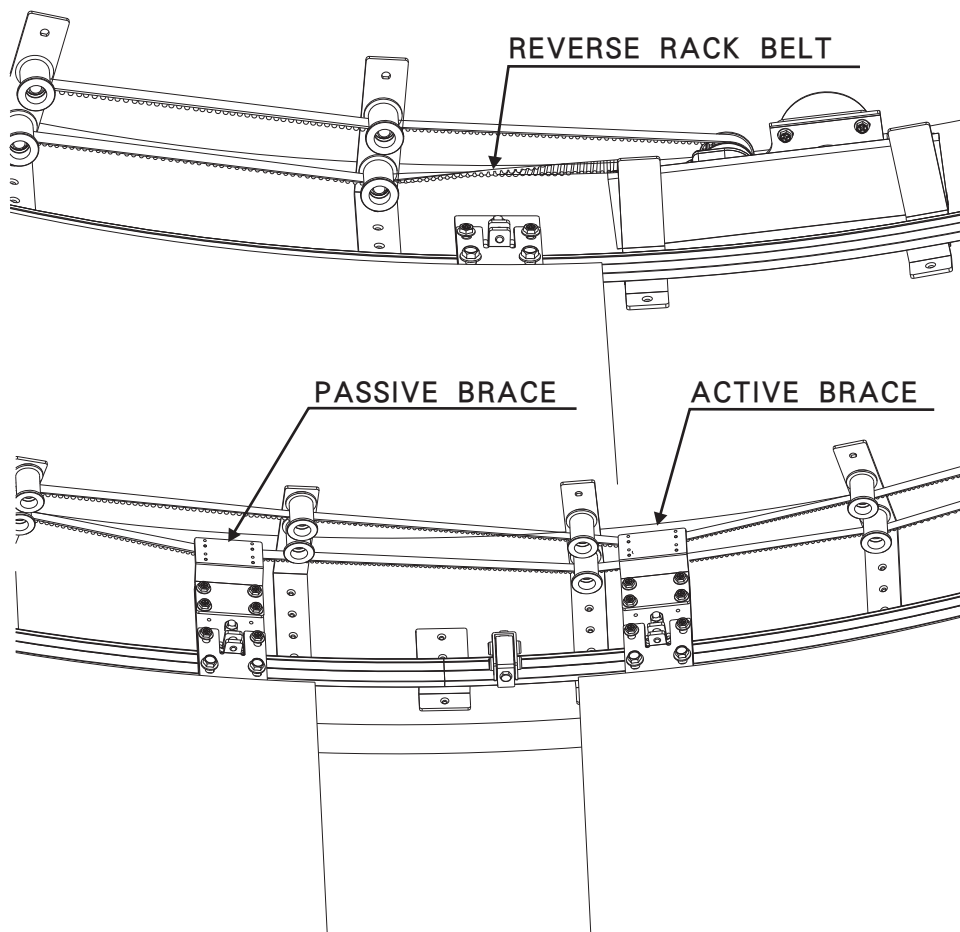
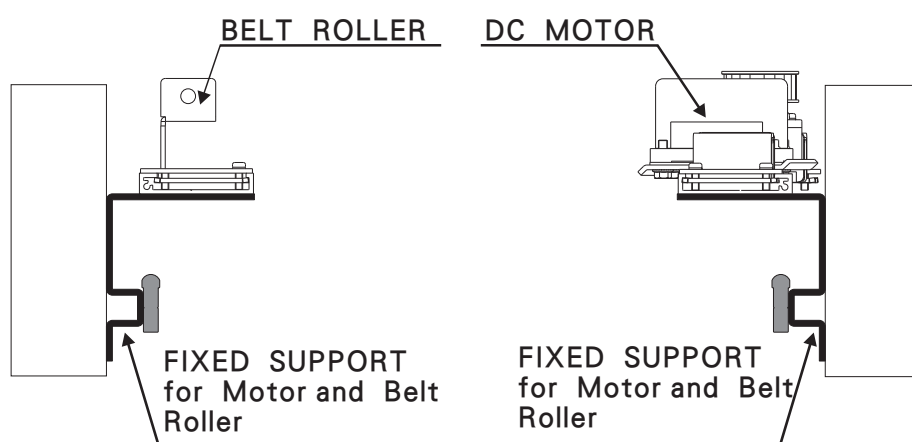
(E): for Aluminum-Profile and wall (if need)

(F): In the middle place, for connect two pieces of Aluminum-Profile

■ INSTALL THE BELT ROLLER AND THE RACK BELT

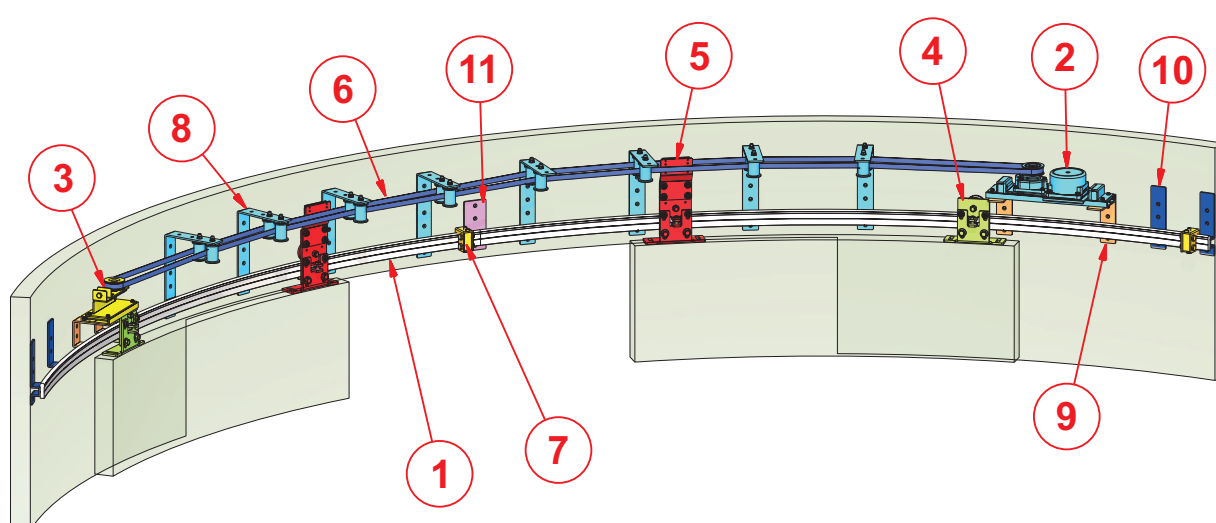


TENSION of BELT can be adjusted by the ADJUSTABLE SCREW of BELT, after that, must tighten the FIXED SCREW of BELT.



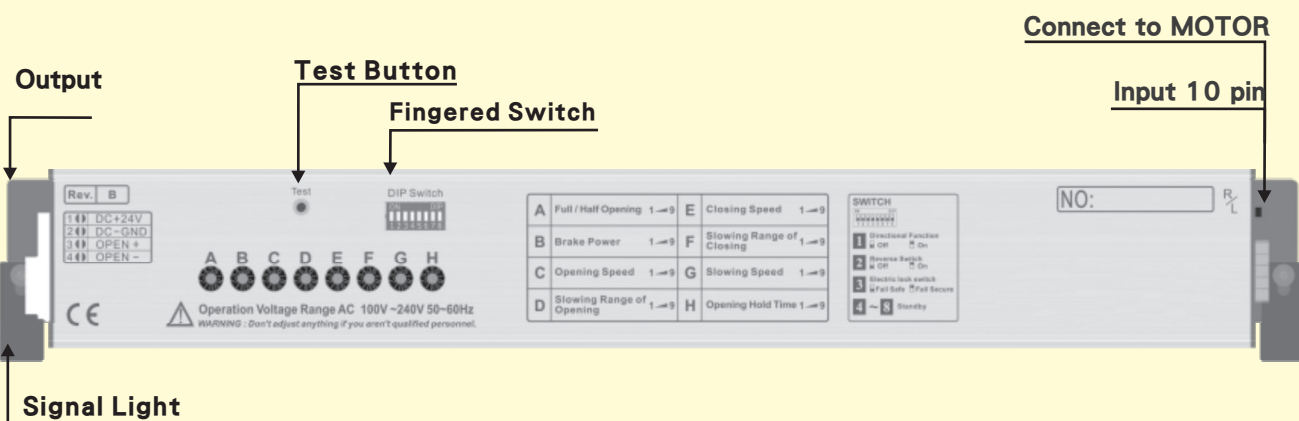
LEGEND OF PART DRAWING

Parts List		
No.	Parts Name	Quantity
1	Aluminum profile	1
2	Motor	1
3	Belt roller	1
4	Hanging-wheel	2
5	Hanging-wheel (include active/ passive brace)	2
6	Rack belt	1
7	Stopper	2
8	Fix support for drive belt roller and aluminum Profile	8
9	Fix support for motor and belt roller	4
10	Supplementary brace	4
11	Connecting brace	1



TEST & ADJUST(TH-R9)

The FACEPLATE of MICRO-CONTROLLER



Red LED-Power is connected.

Green LED-Input the open door signal.

L/R switch-The direction of the door opening: right/left(R/L).

Fingered Switch- Pin 1 - Directional Function

Operation {

- OFF: Normal mode.
- ON: push once , open the door. Push again,close the door.

Fingered Switch-Pin 2-Reverse Switch: in order to control opening and closing direction of the Door -Leaf after power resumes.









Operation {

- OFF: Normal mode, after power resumes, the Door-Leaf opens the door first.
- ON: suitable for Security System, after power resumes,the Door-Leaf closes the door first.

Fingered Switch- Pin 3- Electric Lock Switch

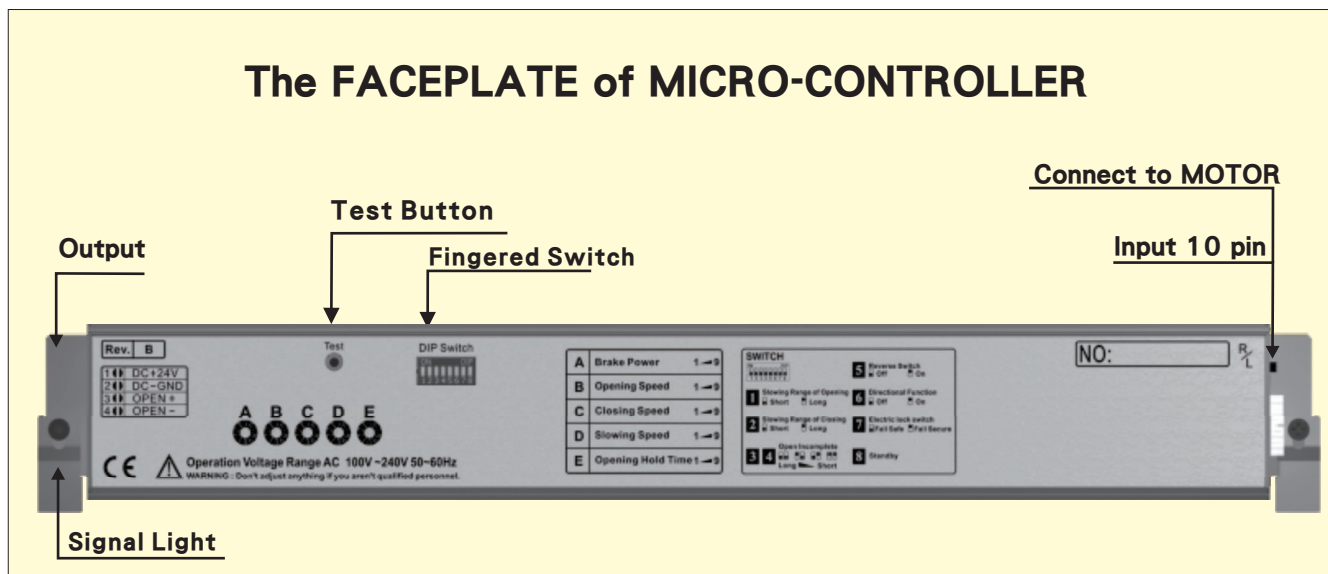
☐ Fail Safe ☐ Fail Secure

ADJUST CONTROLLER

-  **A Full/Half opening**
Adjust the RANGE of the HALF OPEN DISTANCE.
Higher number, wider range.
-  **B Brake power**
The Door-Leaf is slight, the BRAKE POWER is less.
Please choose 0~2 if the Door-Leaf is under 50kg.
Please adjust number from number 5 if the Door-Leaf is over 80kg.
-  **C The opening speed of the door**
Adjust the OPEN SPEED.
Higher number, faster speed.
CAUTION: please adjust the number one by one from low to high.
-  **D The slowing range of opening door**
Adjust the SLOW RANGE of OPENING DOOR
Higher number, more range about the slow range at open door position.
CAUTION: please adjust the number one by one from high to low.
-  **E The closing speed of the door**
Adjust the CLOSED SPEED. Higher number, faster speed.
CAUTION: please adjust the number one by one from low to high.
-  **F The slowing range of closing door**
Adjust the SLOW RANGE of CLOSED DOOR
Higher number, more range about the slow range at open door position.
CAUTION: please adjust the number one by one from high to low.
-  **G The slowing speed of the door**
Adjust the SLOW SPEED. Higher number, faster speed.
CAUTION: please adjust the number one by one from low to high.
-  **H Opening hold time**
Adjust the HOLD OPEN TIME.
Higher number, the hold time is longer.

NUMBER	0	1	2	3	4	5	6	7	8	9
SECOND	0	1	2	3	4	5	6	10	32	64

TEST & ADJUST(AD-R9)



Red LED-Power is connected.

Green LED-Input the open door signal.

L/R switch-The direction of the door opening: right/lift(R/L).

ADJUST CONTROLLER-1



A Brake power

The Door-Leaf is slight, the BRAKE POWER is less.
Please choose 0~2 if the Door-Leaf is under 50kg.
Please adjust number from number 5 if the Door-Leaf is over 80kg.



B The opening speed of the door

Adjust the OPEN SPEED. Higher number, faster speed.
CAUTION: please adjust the number one by one from low to high.

ADJUST CONTROLLER-1



C The closing speed of the door

Adjust the CLOSED SPEED. Higher number, faster speed.
CAUTION: please adjust the number one by one from low to high.



D The slowing speed of the door

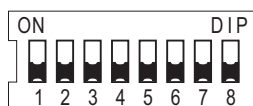
Adjust the SLOW SPEED. Higher number, faster speed.
CAUTION: please adjust the number one by one from low to high.



E Opening hold time

Adjust the HOLD OPEN TIME. Higher number, the hold time is longer.

NUMBER	0	1	2	3	4	5	6	7	8	9
SECOND	0	1	2	3	4	5	6	10	32	64



Fingered Switch

1 Slowing range of opening door



5 Reverse Switch: in order to control opening and closing direction of the Door-Leaf after power resumes.



2 Slowing range of closing door



Operation → OFF: Normal mode, after power resumes, the Door-Leaf opens the door first.
→ ON: suitable for Security System, after power resumes, the Door-Leaf closes the door first.

3 4 Open incomplete



6 Directional function



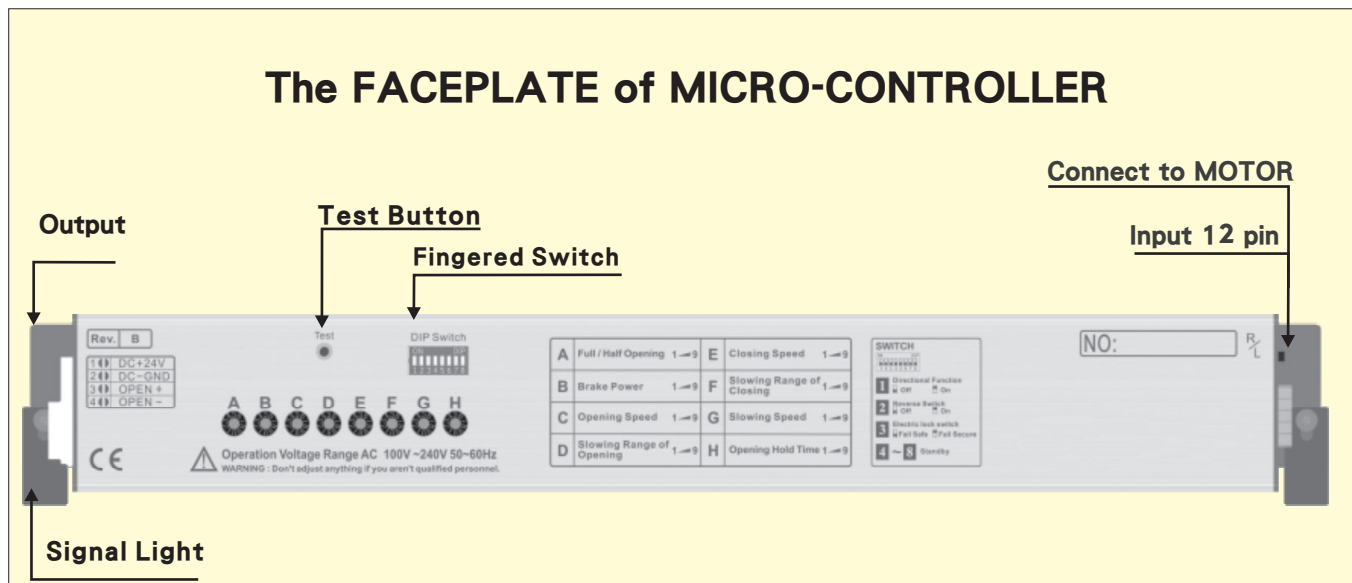
Operation → OFF: Normal mode.
→ ON: push once, open the door. Push again, close the door.

7 Electric lock switch



8 Standby

TEST & ADJUST(TH-RH5)



Red LED-Power is connected.

Green LED-Input the open door signal.

L/R switch-The direction of the door opening: right/left(R/L).

Fingered Switch- Pin 1 - Directional Function

Operation {

- OFF: Normal mode.
- ON: push once , open the door. Push again,close the door.

Fingered Switch-Pin 2-Reverse Switch: in order to control opening and closing direction of the Door -Leaf after power resumes.

Operation {

- OFF: Normal mode, after power resumes, the Door-Leaf opens the door first.
- ON: suitable for Security System, after power resumes,the Door-Leaf closes the door first.

Fingered Switch- Pin 3- Electric Lock Switch

☐ Fail Safe ☐ Fail Secure

■ TEST & ADJUST(TH-RH5)



A Full/Half opening

Adjust the RANGE of the HALF OPEN DISTANCE.
Higher number, wider range.



B Brake power

The Door-Leaf is slight, the BRAKE POWER is less.
Please choose 0~2 if the Door-Leaf is under 50kg.
Please adjust number from number 5 if the Door-Leaf is over 80kg.



C The opening speed of the door

Adjust the OPEN SPEED. Higher number, faster speed.
CAUTION: please adjust the number one by one from low to high.



D The slowing range of opening door

Adjust the SLOW RANGE of OPENING DOOR
Higher number, more range about the slow range at open door position.
CAUTION: please adjust the number one by one from high to low.



E The closing speed of the door

Adjust the CLOSED SPEED. Higher number, faster speed.
CAUTION: please adjust the number one by one from low to high.



F The slowing range of closing door

Adjust the SLOW RANGE of CLOSED DOOR
Higher number, more range about the slow range at open door position.
CAUTION: please adjust the number one by one from high to low.



G The slowing speed of the door

Adjust the SLOW SPEED. Higher number, faster speed.
CAUTION: please adjust the number one by one from low to high.



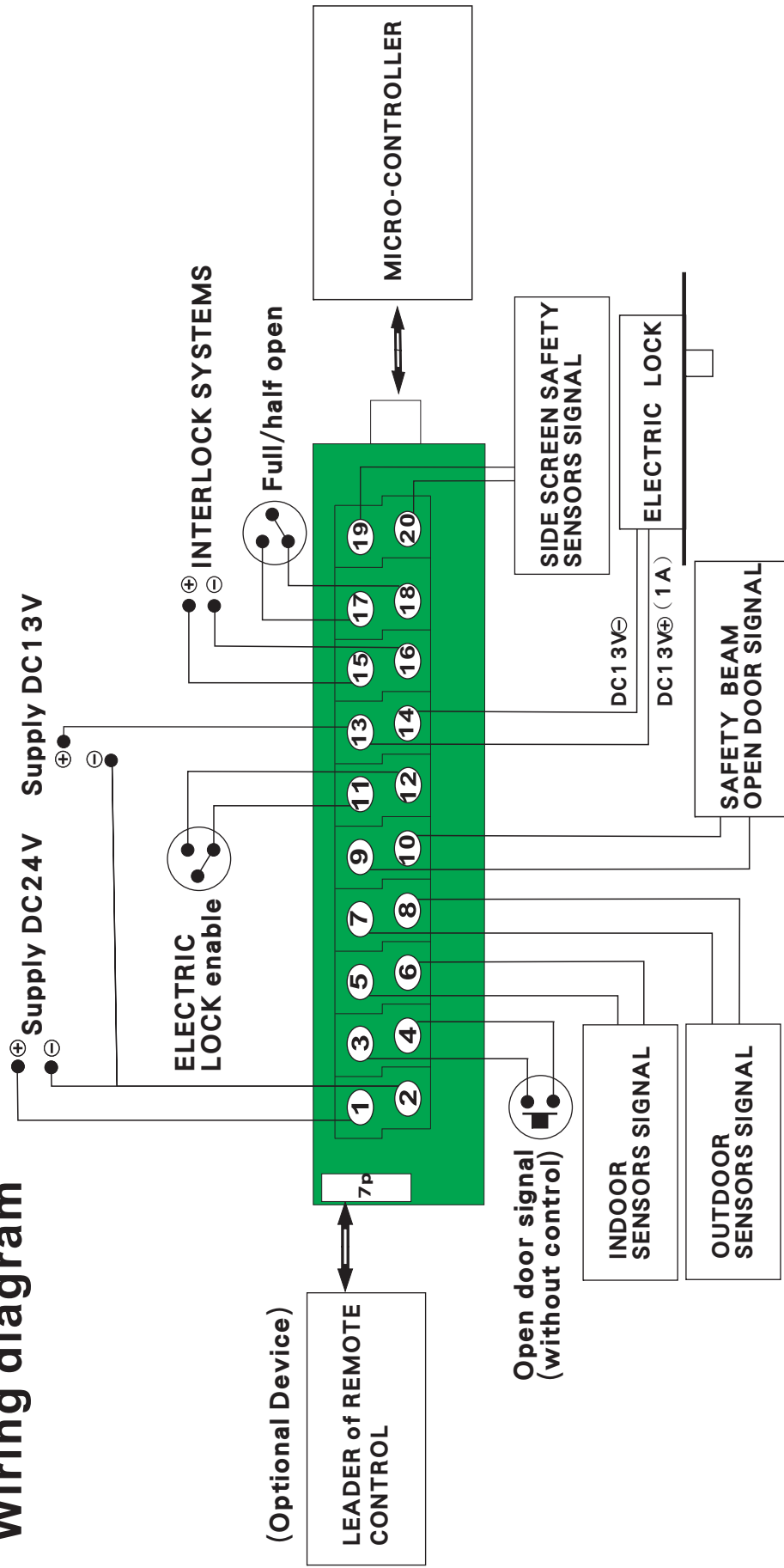
H Opening hold time

Adjust the HOLD OPEN TIME. Higher number, the hold time is longer.

NUMBER	0	1	2	3	4	5	6	7	8	9
SECOND	0	1	2	3	4	5	6	10	32	64

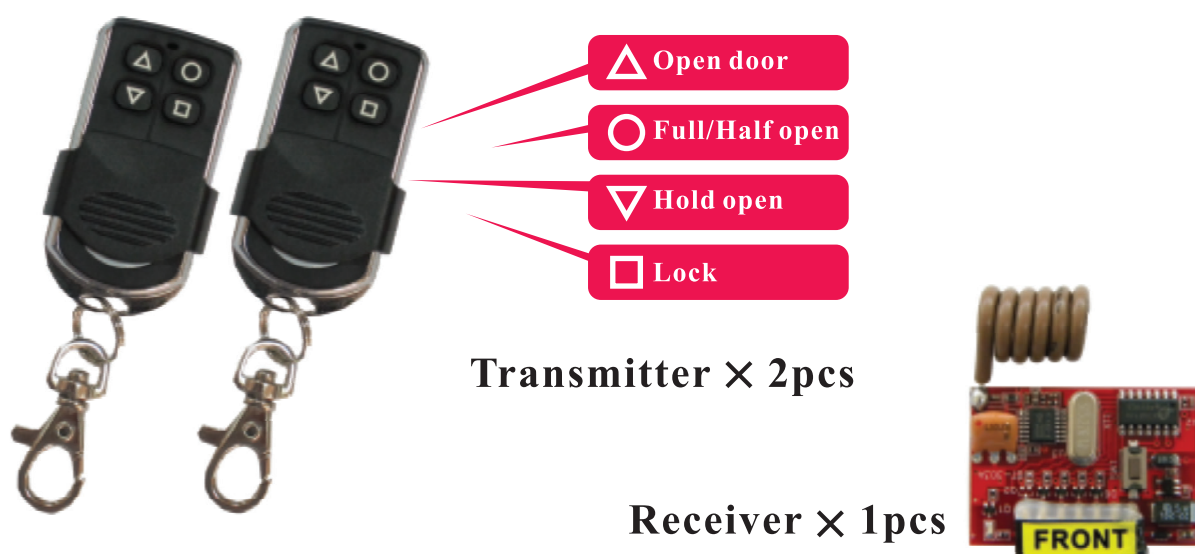
■ WIRING DIAGRAM OF TH-100(TH-R9/AD-R9/TH-RH5)

Wiring diagram



■ TH-125 (NEW)-REMOTE CONTROL

1. Transmitter is 20 bit digital code that is much safety and use fix-frequency component to transmit signal. The frequency of transmitter won't be affected by battery consumption and outside environment.
2. Wireless receiver use super-heterodyne from U.S.A..
The receiver is stably, anti-interference, no extra-wave.
3. Control unit is 8 bit single chip. The order is accurate and action is correct.



■ TH-136-MULTIFUNCTION DIGITAL SWITCH

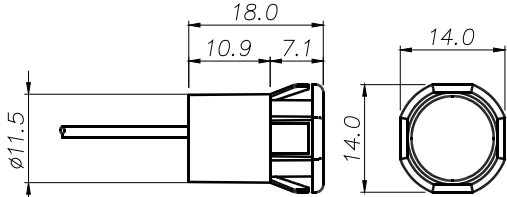
1. Particular Memory Mode according different sessions to work.
2. Safety Alarm by itself to avoid danger happening.
3. Optional Language for easier operate in your location
4. Date and Time setting
5. Easy to install and program.
6. Beautiful and clear LCD panel
7. With buttons lock-on function

VOLUME	124.5X80X38.5(mm)
NET WEIGHT	0.46kg
ACCESSORIES	One piece of 5M cable



■ A-11-SAFETY BEAM



Product	Amplifier	Sensor head
Model	A-11	SC-6M
Power supply	DC24V	 <p>* Fixed hole : 12.5Φ±0.2</p>
Current consumption	3VA Max.	
Response time	5 ms max.	
Min. sensible object	10.0Φ Opaque object	
Control output	1a / Relay (3A/250VAC)	
Output status	NO/NC changeable	
Off delay	0.5s	
Operating circumstance	- 20℃ ~ +80℃ ; 35% ~ 85% RH	

■ 3H-CH01-INFRARED RAY SENSOR

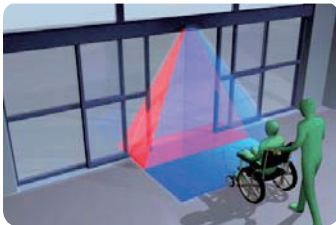


- 1.Small sensor on the market that combines door activation with pedestrian safety in one product.
- 2.Double curtain of infrared safety beams protects pedestrians from dangerous automatic door movements.
3. Accurately adjustable detection area reduces false door activations in busy urban environments.
- 4.Intelligent software along with internal sensor self monitoring ensures safe and reliable operation in all installation environments.

Advanced Unidirectional Detection Sensor with Monitored Safety and Unique "Door Learn" Ability



Pioneering super sensor offers pedestrian door activation and unprecedented safety at mounting heights of up to 3m



- **Energy Efficient**

Intelligent unidirectional detection ability reduces door hold open time by 20% and building energy loss by 6% in a standard installation.

- **Unparalleled Pedestrian Safety**

Unique ability to memorize door motion allows the infrared safety curtain to be focused inside the moving door leaf resulting in unparalleled pedestrian safety.

- **Versatile**

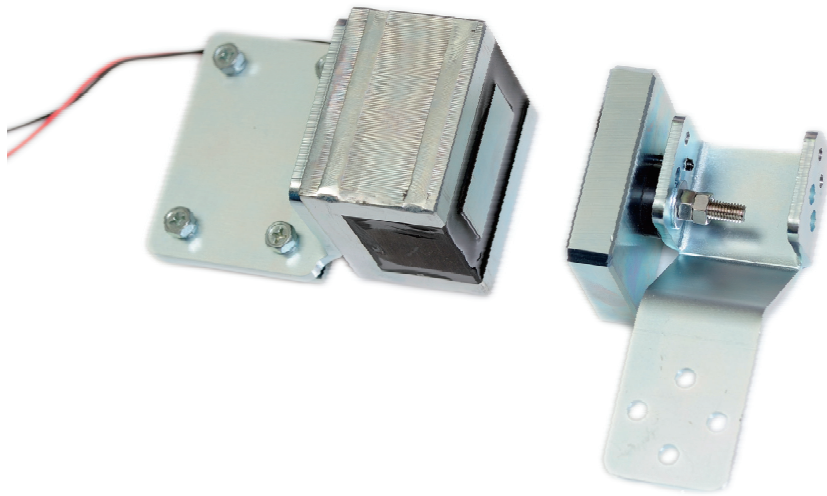
Flexibility to adjust the door activation and pedestrian safety detection zones independently makes the HR100-CT the ideal sensor for every sliding door installation

- **Ease of Installation**

All the information necessary to install the HR100-CT sensor is printed on the sensor body

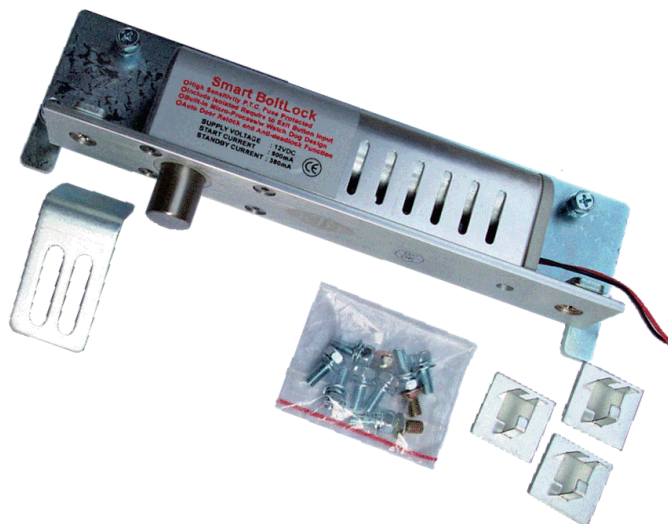
EN16005 is the regulations of power operated pedestrian door sets in all CEN member countries

TH-201-MEGNETIC LOCKS



1. Main subject molded integrally and it can simplify installation procedures
2. Use aluminum alloy frame, strong crashworthy
3. Compact size, it can follow the installation (door type, sliding type)

TH-200LK-ELECTRIC BOLT



1. Don't increase the temperature while it running and working.
2. Tough and durable. There is no problems about the lock be lodged.

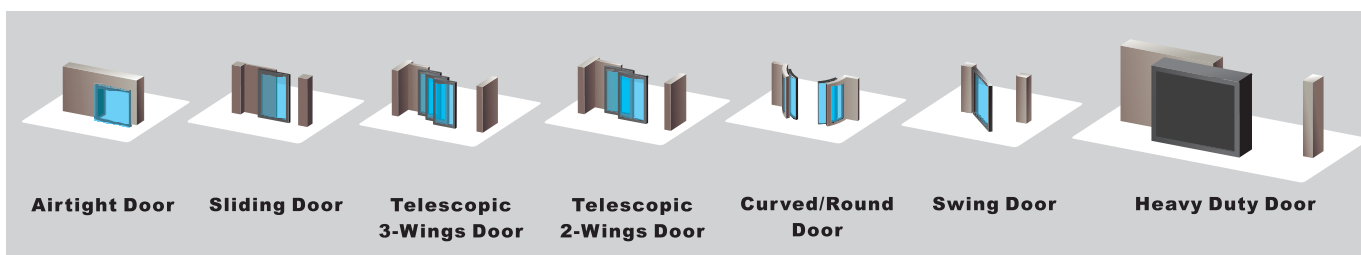
■ TH-135-FUNCTION KEY SWITCH



- 1.It's is suitable any Door Operator of KTH.
- 2.Easy to install and adjust.

• SIX PRESS FUNCTION

- | | |
|---------------|----------------|
| 1. DOOR OPEN | 2. IN ONE-WAY |
| 3. AUTO | 4. OUT ONE-WAY |
| 5. DOOR CLOSE | 6. FULL/HALF |



KING TA HAN TECHNOLOGY CO., LTD

TEL:+886-7-8413699

FAX:+886-7-8413711

ADD:(80673) 2F-1,#286-8,Sinya Rd., Cianjhen District, Kaohsiung City, Taiwan